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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Geng Zhang et al.

Title: AUTOCAPTURE PACING/SENSING CONFIGURATION

Docket No.: 279.E71US1

Filed: January 2, 2001

Examiner: Unknown

Serial No.: 09/753,738

Due Date: N/A

Group Art Unit: 3766

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

We are transmitting herewith the attached:

- ☒ Communication Re: Incorrect Filing Receipt (1 pg.)
- ☒ Copy of Filing Receipt (3 pgs.)
- ☒ A return postcard.
- ☒ A copy of the first page of the Application (1 pg.).
- ☒ A Copy of the filed Combined Declaration and Power of Attorney (2 pgs.).
- ☒ Notification of Change of Correspondence Address (1 pg.).

No Additional fee is required.

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

Customer No: 21186

By: 

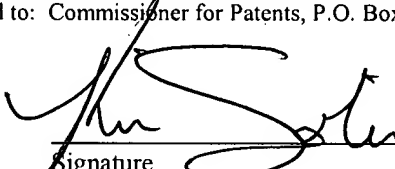
Name: Timothy E. Bianchi

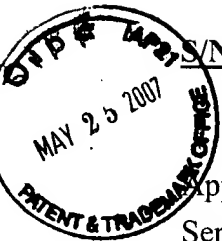
Reg. No. 39,610

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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 23 day of May, 2007.

  
Name

  
Signature



S/N 09/753,738

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:	Geng Zhang et al.	Examiner:	Unknown
Serial No.:	09/753,738	Group Art Unit:	3766
Filed:	January 2, 2001	Docket:	279.E71US1
Customer No.	21186	Confirmation No.	3767
Title:	AUTOCAPTURE PACING/SENSING CONFIGURATION		

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**COMMUNICATION RE: INCORRECT FILING RECEIPT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Applicants hereby request correction of the Filing Receipt with respect to the above-identified patent application. In the Filing Receipt received July 16, 2001, (copy enclosed), the priority data is stated as follows:

THIS APPLICATION IS A CIP OF 09/206,896 12/08/1998 PAT 6,169,921 WHICH IS  
A CIP OF 09/206,329 12/08/1998.

However, it should be stated as follows:

THIS APPLICATION IS A CIP OF 09/206,329 12/08/1998 AND 09/206,896 12/08/1998  
PAT 6,169,921

This is shown by the first page of the application (copy enclosed) and the filed Combined Declaration and Power of Attorney (copy enclosed).

Applicants would appreciate the above-identified printing error be corrected and that a new "corrected" filing receipt be sent to Applicants' representatives at the address given below.

Respectfully submitted,

GENG ZHANG ET AL.

By their Representatives,


SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH,  
P.A.

P.O. Box 2938

Minneapolis, MN 55402

(612) 373-6912

Date May 23, 2007

By 

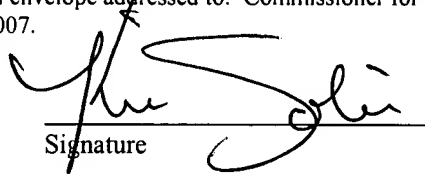
Timothy E. Bianchi

Reg. No. 39,610

TEB:CMG:kms

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Kris Solis  
Name

  
Signature



## UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS  
UNITED STATES PATENT AND TRADEMARK OFFICE  
WASHINGTON, D.C. 20231  
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APPLICATION NUMBER	FILING DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLAIMS	IND CLAIMS
09/753,738	01/02/2001	3762	1378	970663.CIP	11	41	5

CONFIRMATION NO. 3767

## UPDATED FILING RECEIPT



\*OC000000006286212\*

23595

NIKOLAI MERSEREAU & DIETZ, P.A.  
820 INTERNATIONAL CENTRE  
900 SECOND AVENUE SOUTH  
MINNEAPOLIS, MN 55402

Date Mailed: 07/12/2001

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

## Applicant(s)

Geng Zhang, Vadnais Heights, MN;  
Jungkuk Kim, Roseville, MN;  
Qingsheng Zhu, Little Canada, MN;

## Assignment For Published Patent Application

Cardiac Pacemakers, Inc., St. Paul, MN;

## Domestic Priority data as claimed by applicant

THIS APPLICATION IS A CIP OF 09/206,896 12/08/1998 PAT 6,169,921  
WHICH IS A CIP OF 09/206,329 12/08/1998

## Foreign Applications

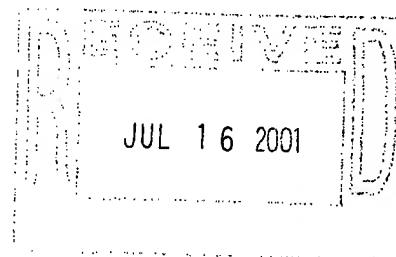
If Required, Foreign Filing License Granted 02/20/2001

Projected Publication Date: 10/18/2001

Non-Publication Request: No

Early Publication Request: No

Title



Autocapture pacing/sensing configuration

**Preliminary Class**

607

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**Data entry by :** HERNANDEZ, JESUSA

**Team :** OIPE

**Date:** 07/12/2001



**LICENSE FOR FOREIGN FILING UNDER  
Title 35, United States Code, Section 184  
Title 37, Code of Federal Regulations, 5.11 & 5.15**

**GRANTED**

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

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**NOT GRANTED**

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

**PLEASE NOTE the following information about the Filing Receipt:**

- The articles such as "a," "an" and "the" are not included as the first words in the title of an application. They are considered to be unnecessary to the understanding of the title.
- The words "new," "improved," "improvements in" or "relating to" are not included as first words in the title of an application because a patent application, by nature, is a new idea or improvement.
- The title may be truncated if it consists of more than 500 characters (letters and spaces combined).
- The docket number allows a maximum of 25 characters.
- If your application was submitted under 37 CFR 1.10, your filing date should be the "date in" found on the Express Mail label. If there is a discrepancy, you should submit a request for a corrected Filing Receipt along with a copy of the Express Mail label showing the "date in."
- The title is recorded in sentence case.

Any corrections that may need to be done to your Filing Receipt should be directed to:

Assistant Commissioner for Patents  
Office of Initial Patent Examination  
Customer Service Center  
Washington, DC 20231

-1-

**AUTOCAPTURE PACING/SENSING CONFIGURATION**

The present application is a Continuation-In-Part of co-pending applications Serial No. 09/206,329 filed on December 8, 1998, and entitled AUTOCAPTURE PACING/SENSING CONFIGURATION and Serial No. 09/206,896 filed on December 8, 1998 and entitled AUTOCAPTURE DETERMINATION FOR AN IMPLANTABLE CARDIOVERTER DEFIBRILLATOR.

**I. Field of the Invention**

The present invention relates to cardiac rhythm management devices and, more particularly, to an apparatus and method that automatically detects whether or not an electrical stimulus results in heart capture or contraction.

**II. Background of the Invention**

Cardiac pacers have enjoyed widespread use and popularity through time as a means for supplanting some or all of an abnormal heart's natural pacing functions. The various heart abnormalities remedied by pacemakers include total or partial heart block, arrhythmias, myocardial infarctions, congestive heart failure, congenital heart disorders, and various other rhythm disturbances within the heart. The general components of a cardiac pacemaker include an electronic pulse generator for generating stimulus pulses to the heart coupled to an electrode lead arrangement (unipolar or bipolar) positioned adjacent or within a preselected heart chamber for delivering pacing stimulus pulses.

Regardless of the type of cardiac pacemaker employed to restore the heart's natural rhythm (ie: ventricular pacing, atrial pacing, or dual chamber pacing in both the atrium and ventricle), each type operates to stimulate excitable heart tissue cells adjacent to the electrode of the pacing lead employed with the pacemaker, which may or may not result in capture. Myocardial response to stimulation or "capture" is a function of the positive and negative charges found in each myocardial cell within the heart. More specifically, the selective permeability of each myocardial cell works to retain potassium and exclude sodium such that, when the cell is at rest, the concentration of sodium ions outside of the cell membrane is significantly greater than the concentration of sodium ions inside the cell membrane, while the concentration of potassium ions outside the cell membrane is

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ATTORNEY FILE NO.: 970663.CIP

### DECLARATION, POWER OF ATTORNEY, AND PETITION

As below named inventors, we hereby declare that: our residences, post office addresses and citizenships are as stated below next to our names; that we verily believe we are the original, first and joint inventors of the subject matter which is claimed and for which a patent is sought on the invention entitled "", the specification of which is attached hereto.

We hereby state that we have reviewed and understand the contents of the specification including the claims as amended by any amendment specifically referred to in the Oath or Declaration.

We acknowledge the duty to disclose information which is material to patentability in accordance with Title 37, Code of Federal Regulations, Section 1.56.

We hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, Section 112, we acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, Section 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application Serial No.	Filing Date	Status
09/206,329	December 8, 1998	Pending
09/206,896	December 8, 1998	Pending

We hereby appoint NIKOLAI, MERSEREAU & DIETZ, P.A., (Customer Number 23595), a professional association, consisting of the following attorneys/agents and the following attorneys/agents individually: Thomas J. Nikolai, Registration No. 19,283, Charles G. Mersereau, Registration No. 26,205, Paul T. Dietz, Registration No. 38,858, Steven E. Kahm, Registration No. 30,860, and Kevin W. Cyr, Registration No. 40,976 of 820 International Centre, 900 Second Avenue South, Minneapolis, Minnesota 55402-3325; Telephone No. (612) 339-7461, and hereby appoints the following attorneys/agents individually: Richard R. Clapp, Registration No. 31,751 and Tyler L. Nasiedlak, Registration No. 40,099 of 4100 N. Hamline Avenue, St. Paul, Minnesota 55112-5798; Telephone No. (651) 638-4000 our attorneys/agents with full power of substitution and revocation to prosecute this application and transact all business in the Patent and Trademark Office connected herewith.



Please direct all telephone calls and correspondence to: Kevin W. Cyr, Esq., at NIKOLAI, MERSEREAU & DIETZ, P.A., 820 International Centre, 900 Second Avenue South, Minneapolis, Minnesota 55402-3325.

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

\_\_\_\_\_(1)  
Geng Zhang

Date: \_\_\_\_\_

Residence:  
Vadnais Heights, Minnesota

Citizenship:  
Peoples Republic of China

Post Office Address:  
654 Parkwood Circle  
Vadnais Heights, MN 55127

\_\_\_\_\_(2)  
Jungkuk Kim

Date: \_\_\_\_\_

Residence:  
Roseville, Minnesota

Citizenship:  
Republic of Korea

Post Office Address:  
1037 Lovell Avenue  
Roseville, MN 55113

\_\_\_\_\_(3)  
Qingsheng Zhu

Date: \_\_\_\_\_

Residence:  
Little Canada, Minnesota

Citizenship:  
Peoples Republic of China

Post Office Address:  
3025 Valento Lane  
Little Canada, MN 55117